Old American Zinc Plant Superfund Site Review Comment Tracker

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1	Section 1.2	IEPA/USEPA	This section states that the PRP filed for bankruptcy in April 2016. The PRP did not file for bankruptcy. The paragraph should be modified to either state that the entity performing the work for the PRP filed for bankruptcy or that "due to bankruptcy proceedings in April 2016, the PRP ceased performing additional work at the site."	The text will be updated accordingly.	Concur
2	Section 3.1 and 3.8	IEPA/USEPA	Alleyways will be restored based on the original condition (i.e., gravel or asphalt). Gravel thickness will be 8 inches, unless the depth of excavation is 6 inches, which will result in 6 inches of gravel replacement. Asphalt thickness will be 3 inches. The alleyways should be changed to the following to be consistent with the removal action: (1) preparing for and excavating soil and gravel from the alleyway (up to 2 feet); and (2) backfilling the excavated area(s) with clean sub-soil and/or backfill, compacting the soil/backfill and placing CA-6 aggregate for the subbase to a depth of 6 inches. In alleys where the excavation exceeds 18 inches, a 2 to 3-inch clean rock (estimated at 6 in) as a base in advance of the CA-6 will be used. Asphalt alleyways should not be remediated.	The BODR text and specifications will be updated to require CA-6 gravel from 0-6" bgs, general fill from 6-18" bgs, and 2 to 3-inch rock from 18-24" bgs. Asphalt alleyways will be removed from the design.	For alleyways, greater than 18", it should 0-6" - CA-6, 6-12" - 2 to 3-inch clean rock, 12-24" is clean sub-soil. For alleyways, 18" in or less, 0-6" - CA-6, 6-18" is clean sub-soil.
3	Section 3.1	IEPA/USEPA	Surrounding properties should be hydroseeded instead of sod similar to that as the removal action	The text and specifications will be updated for hydroseed application instead of sod installation for consistency with the removal action. It should be noted that based on previous project experience, property owner satisfaction is generally lower with hydroseeding and leads to complaints regarding weeds, minor grading issues, or thin stands of grass. To address property owner issues generally requires additional effort to get property owner signoff plus a greater level of maintenance in the subsequent growing seasons by the property owner after signoff.	Concur
4	Section 3.1	IEPA/USEPA	This Section states that the soil staging pile at the FA will be vegetated every 60 days, and watered for a 4-week maintenance period after each seeding. It is assumed that a satisfactory stand will be established after each 4-week maintenance period. This appears to be excessive. Hydroseeding at the end may be sufficient, however it will most likely be conducted at the same time as FA so may not be needed.	Per the phone discussion with EPA on July 13, 2018, the design assumptions will be modified to assume that the FA RA and residential RA will be performed concurrently with a start date in Spring 2019. The soil staging pile needs to be covered to prevent transport of contaminated dust particles back into the surrounding area. While intermittent stabilization (i.e. seeding) of the soil staging pile is not required, it makes it easier to establish growth. Per the phone discussion with EPA on July 13, 2018, the design will be revised to require temporary cover during the RA, with hydroseeding at the end of the RA (if not already placed in consolidation area) or if work stops for an extended period of time. Per EPA's request, hydroseeding the soil staging pile at the end of the RA will be included in the cost estimate.	This should be revised to state "require a tempory cover , if necessary,.."

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5	Section 3.1 and 3.5.2.3	IEPA/USEPA	Accumulated water in unlined excavations and decontamination liquids will be contained and stored at the FA for offsite disposal. It is assumed that the liquids will be nonhazardous. Pumping into 55 gallon drums is not necessary. Do we need water disposal? The removal action is pumping water onto property's grass portion of property.	Water that has not touched contaminated soil may be pumped onto the property owner's grass. However, if water touches contaminated soil, it has the potential to be contaminated, and cannot be discharged onto another part of the property. For the design, the BODR text and specifications will be revised to require containment of any groundwater that has contacted contaminated soil for discharge at the FA in an area with existing groundwater contamination, with EPA approval.	If there is contained water in 55 gallon drums, that originates from a residential excavation location, that water may be used for dust suppression on the Facility Area in areas that have not been cleaned up.
6	Section 3.1 and 3.5.2.3	IEPA/USEPA	Is construction of a decontamination pad necessary? One is to be constructed for the Facility Area and that construction should begin prior to the surrounding properties being completed. For demobilization, that decontamination pad can be used. It is the only time aqueous decontamination may be needed where an area may already be remediated. Dedicated equipment should be used otherwise. There is no need to have two decontamination pads.	Per the phone discussion with EPA on July 13, 2018, the design assumptions will be modified to assume that the FA RA and residential RA will be performed concurrently with a start date in Spring 2019. Per EPA's request, provisions for the decontamination pad will be removed from the surrounding properties design and included in the FA design. The BODR, specifications, and drawings will be updated to state that the decontamination pad will be constructed by the FA RA Contractor for use by the surrounding properties RA Contractor, as needed.	Concur
7	Section 3.4.1.1	IEPA/USEPA	The last paragraph does not include the RI data. Are there no RI properties in this Design? May need to include if future addendums include RI properties data.	RI properties where CH2M was granted access for sketching are included in the design. However, RI properties where CH2M was not granted access for sketching are not included in the Phase I design. The BODR text will be updated to clarify this. CH2M can design the RI properties without access for sketching using aerial imagery, at EPA's direction. These properties can be included in the Phase II design. Please confirm if CH2M should design the RI properties where access has not been granted using aerial imagery.	If designs can be sketched without access, please do so. However, the text should indicate access may need to be verified or obtained prior to remediation.
8	Section 3.5 2.1	IEPA/USEPA	This section states that during the RI, properties were sampled to a maximum depth of 18 inches bgs. This is incorrect. The properties sampled during the RI was sampled to 24 inches. The TCRA was sampled to a maximum depth of 18 inches bgs. The section also states, that based on analytical results from the RI and predesign sampling activities, over 100 properties... This sentence should include the TCRA.	The BODR text will be updated accordingly.	Concur

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9	Section 3.5 2.1	IEPA/USEPA	Can we use an XRF to verify if contamination is still there at 24 inches prior to putting demarcation fabric? Also, a record must be kept of all properties where demarcation fabric was placed. Verify that concentrations are below cleanup levels via XRF. If at 24 inches minimal slag is left, possible excavation versus demarcation fabric? Removal is using XRF for confirmation sampling to ensure that the contamination has been removed. If only a little remains, they are removing it rather than placing demarcation fabric.	The BODR, drawings, and specifications will be modified to include XRF screening at the bottom of the excavation using screening levels established through a correlation study to be completed by FIELDS. Five-point composite samples will be collected in each yard area at the bottom of the excavations for screening. Per phone discussion with EPA on July 13, 2018, the maximum additional excavation will be 6 inches. If impacted soil is still present at 30 inches bgs, demarcation fabric will be placed along the bottom of the excavation. Per EPA's request, ENTACT properties that were sampled to a maximum depth of 18 inches with contaminated soil in the 12-18" interval, will no longer be excavated to a depth of 24 inches, but will instead be screened with an XRF at 18 inches bgs.	The design shouldn't assume FIELDS is available and willing to do a correlation study. The following should be changed "The BODR, drawings, and specifications will be modified to include XRF screening at the bottom of the excavation using screening levels established through a correlation study to be completed by FIELDS. Five-point composite samples will be collected in each yard area at the bottom of the excavations for screening. Per phone discussion with EPA on July 13, 2018, the maximum additional excavation will be 6 inches. " to "The BODR, drawings, and specifications will be modified to include XRF screening at the bottom of the excavation using screening levels and correlation study as determined by EPA."
10	Table 4-1	IEPA/USEPA	A notification should be sent to US Fish and Wildlife and National Historic Preservation Act prior to construction activities.	Consultation letters to these agencies have been drafted by CH2M, and will be provided to EPA for submittal. The final design will be revised, as needed, based on agency responses.	EPA will draft the HPA notification and submit prior to final design submittal.
11	Section 3.2.1.1	IEPA/USEPA	Properties where access was not gained, it should be detailed that access will be needed prior to remediation.	The BODR text and drawings will be updated accordingly. In addition, during the RA, access will need to be confirmed for all properties by ensuring the access agreement is valid and there has been no change in property ownership. This language will be added to the BODR text and specifications.	Concur
12	Sections 3.1 and 3.11	IEPA/USEPA	If removal of plants/shrubs can be avoided, please do so.	Provisions will be included in the BODR and specifications to use XRF to determine if the landscaping area exceeds the cleanup levels for the COCs. A minimum 3-point composite sample will be screened. Larger landscape areas will use a 5-point composite sample for screening. Excavation of the landscaping area will be determined based on the results of the XRF screening. In addition, the property owner will identify any shrubs or landscape areas they do not want removed/excavated during the initial preconstruction meeting.	Composite samples may not be necessary. Please remove the following two "A minimum 3-point composite sample will be screened. Larger landscape areas will use a 5-point composite sample for screening."

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13	Sections 3.1 and 3.11	IEPA/USEPA	Maintenance for hydroseed should be 6-8 weeks.	The BODR text and specifications will be updated accordingly. It is recommended that maintenance is limited to watering, and that the RA Contractor distribute lawn-care instructions to the property owner when landscaping is installed. Inspections should be performed and documented during maintenance watering activities to limit potential damage and rework to the new landscaping (through no fault of the RA Contractor) resulting from the property owner mowing at inappropriate times, heights, or other activities that could potentially damage the new landscaping.	Concur
14	Section 3.4.1.2	IEPA/USEPA	Second preconstruction meeting – states that the property drawings will be updated. Is that necessary? Is this by hand on existing drawings? The design drawings will not be updated.	The property drawings will be updated in the field either by hand or in a PDF editing software. New design drawings will not be generated. The BODR text will be revised to clarify this.	Concur
15	Section 3.4.1.6	IEPA/USEPA	What stumps will need to be grinding? Why not avoid these stumps?	Stump grinding is recommended to remove contaminated soil that is entrained in the stumps. However, per phone discussion with EPA on July 13, 2018, stumps will not be removed or ground. Stump grinding will be removed from the BODR, specifications, and cost estimate.	Concur
16	Section 3.4.1.6	IEPA/USEPA	What does this mean? Some trees may require removal due to elevated COC concentrations in the soil, presence of slag, health and safety concerns, or to address property owner concerns. To define elevated COC concentrations, a surface-weighted average concentration (SWAC) was calculated for each COC in each yard area. The SWAC was calculated using the maximum COC concentration from 6 to 24 inches below ground surface (bgs) (i.e., material that would remain in-place during excavation), the surface area underneath tree drip zones, the maximum allowable concentrations of chemical constituents in uncontaminated soil used as fill material (defined in 35 Illinois Administrative Code 1100, Subpart F), and surface area outside of tree drip zones. If the calculated SWAC exceeded the cleanup criteria for any of the COCs, additional tree removal was assumed to achieve the target excavation depth in the yard area. This seems unnecessary. Is this for trees under 4 inches in diameter? How	The SWAC was performed on a property-by-property basis, and considered COC concentrations and drip zone areas. Within tree dripzones, excavation depths are typically limited by the presence of the tree roots. Generally, where the COC concentrations were high and areas under the drip zone were large, additional tree removal was recommended to ensure the remedy was effective in reducing the concentrations of COCs in the yard to below the ROD cleanup levels. However, since EPA has requested that stump grinding be removed from the design, additional tree removal provides no additional benefit for contamination removal. Per EPA's request, the BODR and drawings will be updated to remove the SWAC calculations and additional tree removal (i.e. no removal of trees >4" diameter).	Concur
17	Section 3.4.1.6	IEPA/USEPA	Of the 75 properties needing remediation, the average area requiring clearing and grubbing is estimated to be 5,280 square feet per property. That appears to be very high.	This is the average size of the remediation area. This value will be updated for the final design based on EPA, IEPA, and USACE drawing comments.	Concur
18	C-96 - NON-RESPO	IEPA/USEPA	02-09.0-101-004 is now removal property. Please remove from this design document. If removal does not address the property, it can be added to the design addendum.	The removal action list will be updated to include this property. This property will be removed from the design.	Concur
19	Appendix D – Engineer's Cost and Estimate	IEPA/USEPA	The design states that only trees with a diameter of less than 4" will be removed. However, the estimate includes trees that are 4"-12", 12"-30", and > 30" diameter. This should be corrected.	Per comment #16, SWAC calculations and tree removal for diameter >4" will be removed from the design.	Concur
20	Figure C-16	IEPA/USEPA	Figure C-16, CH2M ID 764, NON- is not on the list to be remediated. It is a commercial property for the Village of Fairmont City and the zinc exceedance is below non-residential criteria. Please remove from the design.	This property will be removed from the design.	Concur

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21	Figure C-21	IEPA/USEPA	Figure C-21, for NON- , 02-04.0-313-029. Was access granted to this parcel? It is not listed in EPA's files as access granted.	This property was sampled by ENTACT. CH2M was not granted access to sketch this property, so the 2002 ENTACT sketch was used for the design. A note will be added to this drawing stating that that access will be needed prior to remediation.	A general comment to verify and/or obtain access to all properties will be needed may be sufficient.
22	Figure C-24	IEPA/USEPA	Figure C-24, NON- (02-04 0-307-056), should be the entire back yard to 12", not just BY1.	The drawing will be updated accordingly.	Concur
23	Figure C-25	IEPA/USEPA	Figure C-25, NON- (02-09 0-108-069), the drawing should indicate the sub-parcels so implementer has some idea of where the sections are since no lengths or measurements are added to the design. The sampling sketch has more information than the design. Design notes 6 states features were not measured due to access issues. The Village of Fairmont City granted access for design purposes and inventorying for such sketches. They have yet to grant access for actual remediation.	Note #6 will be removed. CH2M obtained access to this property, as it was revisited during field sketching.	Concur
24	Multiple Drawings	IEPA/USEPA	The following figures state that there were access issues for the design: C-7, C-17, C-18, C-19, C-20, C-21, C-22, C-23, C-25, C-27, C-28, C-29, C-30, C-32, C-33, C-35, C-36, C-38, C-39, C-42, C-43, C-49, C-51, C-52, C-53, C-58, C-59, C-60, C-61, C-62, C-72. It was EPA's understanding that designs for properties that needed to be remediated were conducted only at properties where access was granted. The access agreement includes inventorying features for design.	These are properties that were sampled and sketched by ENTACT in 2002. CH2M did not receive access for updating the field sketch in 2017. Therefore, CH2M performed a visual survey from the road/sidewalk to confirm the major features on ENTACT sample sketch still existed, but could not enter the property to confirm measurements. A note will be added to these drawings stating that that access will need to be granted prior to remediation.	Some of the properties listed did have access granted prior to field sketching. Regardless, a general comment to verify and/or obtain access to all properties will be needed may be sufficient.
25	Section 3.4.1.4	IEPA/USEPA	Section 3.4.1.4 states preconstruction survey to document existing surface elevation, post-excavation survey to document excavation depths, post-backfilling survey to document the restored elevations. Why is surveying included? It is not needed.	These surveys were included as a quality control measure to document that the excavation depth is reached throughout the yard area being excavated. In addition, these surveys confirm that the property is restored to preconstruction elevations, which protects the EPA and RA Contractor in the event a property owner complains about pooling water or drainage issues in future. In such an event, the survey would demonstrate that no new drainage issues were created during RA since the property was restored to preconstruction elevations. Per the phone discussion with EPA on July 13, surveys will not be removed from the design, but the language will be modified to be more general, stating the survey method will be determined by the Owner's Representative.	The text should be clarified that "if determined necessary" then survey method will be determined by the Owner's Representative.
26	Throughout Document	IEPA/USEPA	Restoration throughout the document should be hydroseed and not sod to be consistent with the removal action.	Text and specifications will be updated accordingly.	Concur
27	Figure C-31	IEPA/USEPA	Figure C-31, 2870 NON- , is incorrect. It should be back yard 12". The lot was divided in half from the diagonal to the edge of the lot at the corner of N See sample diagram from TCRA ID 155R or page 305 of 651 of Entact Removal Action Report Vol 2 (pdf).	The drawing will be updated accordingly.	Concur

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28	Figure C-35	IEPA/USEPA	Figure C-35, NON- [redacted], the wooded area of these parcels was not sampled during the TCRA and should not be included in the excavation area or calculated cubic yards. Please modify the parcels to not include the overgrown wooded area.	The wooded area will be removed from the excavation extents and the volumes will be updated accordingly. A note will be added to the drawing indicating the wooded area was not sampled and is excluded from the excavation extents.	Concur
29	Figure C-41	IEPA/USEPA	Remove Figure C-41, NON- [redacted] from the document. It was cleaned up in the TCRA as property 013R. The parcel number was mistakenly replaced by parcels that are to be remediated as part of the Facility Area (02-04 0-405-046 through 048).	This property will be removed from the design.	Concur
30	Figure C-42	IEPA/USEPA	Figure C-42 states PARCEL ID(S) 02-09.0-206-001 AND 02-09 0-206-002 were not sampled. This is not true. ENTACT sampled these parcels on 4/17/03 (ENTACT ID 451R). The parcels that need to be remediated were part of ENTACT ID 443R. CH2M combined the two properties together into one property.	The note stating that -001 & -002 were not sampled will be removed. The remainder of the drawing will not be changed, as the properties were combined in accordance with changes in the county's database between when ENTACT performed the sampling and now.	Concur
31	Figure C-71	IEPA/USEPA	Figure C-71, Romaine Court (02-04.0-400-018 AND 02-04.0-400-019) it, should be full back yard and full front yard at 6". This property has been given to removal since surrounding parcels are part of removal. Please hold until next document to see if addressed by removal.	This drawing will be updated to back/front and excavation limits will be revised accordingly. This property will be removed from the Phase I design and added to Phase II design if not completed by removal action.	Concur
32	Alley 19	IEPA/USEPA	Alleyway 19 – Per the Village of Fairmont City, please remove Alleyway 19 from the Design. Also, it is asphalted and should be protective.	This alley will be removed from the design.	Concur
33	Figure C-61 and C-72	IEPA/USEPA	C-61 and C-72 were denied access to remediate. It should be noted that access may not be granted.	A note will be added to these drawings, indicating that access may not be granted.	Concur
34	Section 2.2	USACE	Would air knifing around trees instead of manual digging be acceptable	CH2M has performed air knifing in the past without much success. The most effective way to remove soil in the root mass is by removing the trees, which is why tree removal was considered as part of the SWAC calculations. However, SWAC calculations are no longer being considered/applied to the design. The design will be modified to state that excavation around tree roots will be performed by manual excavation or by a method approved by the Owner's Representative.	Air knifing was discussed with EPA during the site visit, it was our understanding it would be an option. USACE has successfully employed air knifing in the past for similar Region 7 work, request flexibility to keep as an option. In addition, it is our understanding that for the present TCRA, only mechanical excavation techniques are currently being employed for excavation around trees. It appears other comment responses allow for the RA approach to be consistent with the TCRA. EPA Reponse: The text indicates that other method's as chosen by USACE may be used. Therefore, air knifing or mechanical excavation could be used.

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35	Section 3	USACE	Noted in the document are Preconstruction Surveys, Post-Construction Surveys, and Post-Backfilling Surveys. All the surveys required will dramatically increase costs and may prolong timing of excavation and/or backfilling. In previous projects, keeping track of all load tickets to determine the quantities of soil transported to and from excavation sites and use of a grade laser level which produces a 360 degree laser line around a work space for confirmation of backfill grade has been sufficient. Would this be an acceptable approach?	Quantities from truck tickets will not be as accurate as they would be from a property survey. In addition, truck tickets will not identify where the soil was removed from on the property. Surveying does increase the cost, but should not impact timing, as it can be done immediately after excavation/backfill with Owner's Representative's oversight and approval to proceed. Per the phone discussion with EPA on July 13, surveys will not be removed from the design, but the language will be modified to be more general, stating the survey method will be determined by the Owner's Representative. The design documents will be updated to also state that the RA Contractor will be allowed to proceed to the next DFOW upon field verification by the Owner's Representative, prior to receipt/review of survey submittals.	Concur EPA Response: See response to Comment #25
36	Section 3.1	USACE	Is there a size specification for the chipped waste?	There is not a size specification for the chipped waste. Since additional tree removal is not being performed based on SWAC calculations, and stumps are not being ground, the quantity of chipped waste will be small. Therefore, the design documents will be revised to state that the chipped waste will be stockpiled in its own stockpile at the FA for use at the FA, or to compost. The chipped waste cannot be used on any offsite properties.	Concur
37	Section 3.1	USACE	A combination of mechanical scraping and manual excavation should be used to remove a reasonable amount of soil. Limiting to manual excavation only will drastically increase cost. Please clarify language intent.	The text allows for a combination of mechanical and manual excavation within the tree drip zone if the drip zone radius is greater than 8 feet. However, if the drip zone radius is less than 8 feet, only manual excavation is allowed, to protect the tree and root system. The text in the BODR will remain as follows: *"Within 8 feet of a tree trunk (or within the drip line of a tree if the drip line radius is less than 8 feet), excavation will be limited to a maximum depth of 6 inches and will be performed exclusively using manual excavation to minimize tree-root damage, unless shown otherwise in the property drawings. Manual excavation will be performed to expose and avoid damaging woody roots 1 inch in diameter or greater. Manual excavation will follow the roots 1 inch in diameter or greater to the horizontal extent of the excavation (or the tree drip line) to expose the roots. At a distance greater than 8 feet from the trunk, mechanical excavation may be conducted using a mini-excavator (or equal) and spotter to remove soils between roots exposed by manual excavation."*	It is our understanding that for the present TCRA, only mechanical excavation techniques are currently being employed for excavation around trees. It appears other comment responses allow for the RA approach to be consistent with the TCRA. EPA Response: Please be consistent with Comment 34. The text will say other method's could be used. It entirely depends on the tree and type for this statement to be true. If you would like to keep it in, do not make it definitative.

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38	Section 3.1	USACE	Will the staging pile require an additional 4 inches of topsoil each time the staging pile is re-vegetated?	Per comment #4, the staging pile will only be seeded once (if needed). The BODR text and specifications will be updated accordingly.	Concur
39	Section 3.1	USACE	This seems like a vague requirement. What's the purpose of doing this? Reduce TSS? Consider including what function should be accomplished by doing this. e.g. Is the result of pumping through a thin erosion control blanket the same as pumping through a thick multi-layered fabric?	Pumping through the geotextile material is necessary to prevent discharge of soil and/or silt with the removed stormwater. The discharge requirements will ultimately be determined by the approving authority for the SWPPP, which will be developed during the RA.	Concur
40	Section 3.1	USACE	This will potentially incur a substantial cost. After the 4th week period, costs should be incurred by the owner. In addition, hydroseeding was mentioned as a possible TCRA option. Is this an available alternative?	Seeding, maintenance period, and landscaping replacement will be updated throughout the design documents to be consistent with the removal action. This includes hydroseeding, and a 6 week maintenance period/landscape replacement period.	Concur EPA Response: if extenuating circumstances then may need longer.
41	Section 3.2.1.1	USACE	What is the status of the access agreements?	Access was granted for properties that were sampled by CH2M as part of the pre-design sampling events. Properties that were sampled by ENTACT without current signed access agreements on file will require new property owner consent for access prior to the RA. CH2M has sent access agreement for the ENTACT properties included in this design and will add a note on the drawings for properties that still need owner consent for RA access.	Concur
42	Section 3.2.1.3	USACE	An access area would need to be maintained without silt fencing to allow dump trucks to approach the stockpile.	That is correct. The text in the BODR will be updated to clarify this.	Concur
43	Section 3.2.1.3	USACE	Will this liquid also be considered non-hazardous? Will it be contained and disposed of off-site, as described in 3.1 for unlined excavations? Or discharged into local storm sewer system after pumping through a geotextile?	Stormwater runoff is now being diverted using grass-lined perimeter ditches, as described in the FA design. The text in the residential design will be updated accordingly.	Concur
44	Section 3.2.1.1	USACE	Are utilities currently available at the FA?	Utilities are not currently available at the FA. Coordination for temporary utility installation will be done during the RA. There is potential to use the utilities brought onsite by the FA RA Contractor; however, this is dependent on construction sequencing and will need to be coordinated with the FA RA Contractor. The BODR text and drawings will be updated accordingly.	Concur
45	Section 3.4.1.1	USACE	No surveys were performed. Are there any encroachment concerns when excavating between or along two properties?	Yes, this is a concern. The preconstruction property surveys can be used to help evaluate property lines. In addition, surveyors can use metal detectors to help locate property corners and use property dimensions to help identify property boundaries. The BODR text will be updated accordingly.	Concur EPA Response: Removal has not had any issues determining property boundaries for properties so far (properties with homes).

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Comment Number	Reference Page or Sheet No.*	Reviewer	Review Comment	Response	Backcheck/Notes
46	Section 3.4.1.3	USACE	This is a good safety practice, but somewhat costly. EPA does not include this additional service in their approach.	Removing 3rd party locates is not recommended. They are included to protect the RA contractor (and EPA) from hitting owner-installed utilities or other subsurface features that current property owner may not be aware of which won't be identified by JULIE. Unmarked utilities pose a health and safety risk. In addition, the financial risk of replacing a utility that is hit will likely outweigh the cost of the 3rd party utility locate. CH2M recommends that this requirement remains in the design documents; therefore, no change will be made regarding 3rd party utility locates.	Concur EPA Response: The Removal Action does not include another 3rd party locate other than JULIE. Part of the walkthrough should be asking the home owner if they are aware of any owner installed utilities. If damage occurs to something unknown, it is fixed if requested by the home owner. The design should be consistent with the removal action. The text can state if demeed necessary, an additional 3rd party locate other than JULIE may be used.
47	Section 3.4.1.6	USACE	Typically, we would remove as much root mass as is easily achievable with an excavator bucket. Additional stump grinding feed are excessive. Is the alternative an acceptable approach?	Since the root mass holds contaminated soil, stump grinding was recommended to ensure all contaminated soil is removed. However, due to cost concerns and consistency with the removal action, stump grinding will be removed from the design per EPA's request. This section will be updated with text similar to CH2M's response to comment #37 and will clarify that excavation will be performed to remove as much soil around the root mass as possible, if the maximum excavation depth cannot be reached.	Concur
48	Section 3.4.1.6	USACE	What does this mean? If an owner says that a tree is unhealthy then the contractor will remove it for them?	During RAs at other sites, the EPA has accommodated property owner requests for additional tree removal. This text was left in the design in the event EPA directs the Owner's Representative to remove additional trees at the property owner's request during the RA.	Concur

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49	Section 3.4.1.6	USACE	Would it be acceptable to use an XRF onsite for screening of suspect areas?	See response to comment #9.	Utilizing FIELDS (EPA) to perform the correlation study instead of the Contractor should greatly improve the timing for XRF utilization. Please explain how this process will work. For example, it was our understanding the correlation study is specific to the XRF(s) to be used in the field. In this case, USACE and the contractor possess Niton XRF instruments. It would be of great benefit to the project if the correlation study can be completed independently, and appropriate correction factors applied to each XRF. EPA Response: See response to comment 9.
50	Section 3.4.1.6	USACE	Does it matter if the suspected contaminated soil IS NOT from the smelting historical operations?	No. The text in the BODR will be updated to clarify.	Concur
51	Section 3.8	USACE	Proof rolling the subgrade of native soil seems unnecessary. The common approach for reconstructing these alleyways is to roll backfill lifts with a vibrator roller in 6 inch increments. Then do compaction testing on the final 6 inch clay subsoil layer before the 6 inch gravel layer on top. Is this an acceptable alternative?	Density testing provides an indication of how well the soil is compacted at a specific spot. Proof rolls indicate how well the soil is compacted throughout an area. Since the alleyways have potential for vehicular and truck traffic, proof rolling is recommended. However, the proof roll may be performed on the final lift of general fill, prior to placement of the CA-6 material if subgrade testing is not desired. The text will be revised to state density testing will be performed for each 6-inch lift of general fill that is placed. In addition, a proof roll will be performed on the general fill for the entire length of the alley, prior to placement of the CA-6 material. Density testing will also be performed on the final 6-inch lift of gravel.	Concur EPA Response: Proof rolling and density testing are not being performed in the removal action on the alleyways. Please update to be consistent with the removal action.
52	Figure G-2	USACE	Has the construction staging area been tested for contamination? It is counterproductive to establish a staging area and temporary construction facilities on an area that later requires remediation.	A portion of the staging area is asphalt, and should be protected from any potentially contaminated soil. However, the RA Contractor will setup the staging area according to the equipment and facilities that they need and will be required to make sure that they are setting up on clean portions of the site, or excavate and remove contaminated soil to ensure they are on clean soil. The text will be revised to clarify this.	Concur EPA Response: An Institutional Control will be placed on the parking lots and buildings to remain in place and this area can be used for staging.

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53	SECTION 01 33 00 SUBMITTAL PROCEDURES	USACE	This specification section will have to be revised prior to contract solicitation in order to facilitate USACE construction management procedures and address the required use of RMS.	Per phone discussion with EPA on July 13, 2018, it is anticipated that CH2M will provide design support during the RA as questions arise. EPA does not anticipate CH2M participating in submittal reviews. Therefore, this specification will need to be updated by USACE to reflect their CM procedures. Per EPA's request, CH2M will add language to this specification stating that it may change during the RA phase. USACE will update during the RA phase, accordingly.	Concur
54	SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS	USACE	Stockpiles will not be placed in locations that will hinder or require double-handling material during construction of the consolidation cell.	The specification will be updated to clarify this.	Concur
55	SECTION 31 10 00 SITE PREPARATION	USACE	If contamination extends beyond excavation limits, is the intent to leave in place?	The excavation limits are defined based on composite sample locations and it is assumed they will not be expanded. Based on field observations during the RA, the excavation limits may be expanded at the direction of the EPA. The design documents will be revised to state this.	Concur
56	SECTION 32 92 00 TURF AND GRASSES	USACE	Consider language in this section about the soil health. For example, sod from Jefferson County, MO would probably have elevated levels of lead in the soil.	The restoration plans have changed to hydroseeding, so this is no longer applicable. The text and specifications will be updated for hydroseed application instead of sod installation for consistency with the removal action.	Concur
57	Field Critical Inspection Log	USACE	Spelling: properties	The spelling will be corrected.	Concur
New Comment	Figure C-54 and C-49	USEPA	Properties 02-04.0-202-003,02-04.0-202-004 (233R) and 02-04.0-202-019, 02-04.0-202-020, 02-04.0-202-021, 02-04.0-202-022 (095R) are being considered for removal since in between removal properties. Please hold to addendum to see if addressed by removal.		

Notes: